



MAR 17 2012

The Honorable Mark Miller  
Vice-Chair, Special Committee on Nanotechnology  
State of Wisconsin Joint Legislative Council  
P.O. Box 2536  
Madison, WI 53701-2536

Dear Senator Miller:

Thank you for your letter dated February 2, 2012, concerning Federal programs related to nanotechnology. In your letter, you describe the activities of the Special Committee on Nanotechnology that was created by the Wisconsin Joint Legislative Council, and make a number of recommendations regarding Federal policies and programs that impact nanotechnology. Among these are recommendations related to workplace safety.

The Occupational Safety and Health Administration (OSHA) is committed to protecting workers from potential hazards associated with workplace exposure to nanomaterials, and we are working with our Federal agency partners to coordinate activities in this area. As you are aware, much remains to be learned about potential hazards related to nanomaterials. OSHA is participating in several interagency groups exploring safe handling of nanomaterials, including the Emerging Technologies Interagency Policy Coordination Committee's (ETIPC) efforts to standardize definitions, labeling practices, and other policies. Together with the National Institutes of Health (NIH), the National Institute for Occupational Safety and Health (NIOSH), and other National Nanotechnology Initiative (NNI) stakeholders, OSHA is also exploring development of recommendations for risk management and medical surveillance programs for workers exposed to nanomaterials, as well as creation of guidance materials to help small businesses apply control measures where potential nanomaterial hazards are present. Currently, OSHA has a public website on nanotechnology with information on applicable OSHA standards and links to existing resources for employers and workers. The Agency is also developing a Fact Sheet on nanomaterials that briefly outlines available information on current uses in workplaces, health effects, and possible control measures.

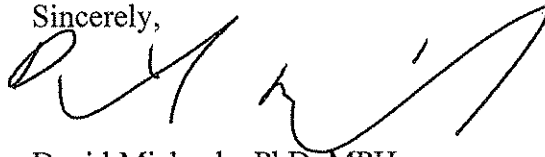
While we work on new approaches for addressing potential hazards associated with nanomaterials, OSHA maintains a number of requirements that serve to protect workers. The Occupational Safety and Health Act of 1970 establishes a "general duty clause" (Section 5(a)(1)) that requires employers to furnish employees with a place of employment that is free from recognized hazards that are likely to cause death or serious physical harm. Several existing OSHA standards may also be applicable in situations where employees are exposed to nanomaterials. Examples include requirements for personal protective equipment (29 CFR 1910.132); hazard communication (29 CFR 1910.1200); and work with hazardous chemicals in

laboratories (29 CFR 1910.1450). Additional information is available on the Agency's web site at <http://www.osha.gov/dsg/nanotechnology/nanotechnology.html>.

In your letter, you specifically recommend that OSHA require material safety data sheets to provide information about nanomaterials. The Agency will soon issue revisions to the Hazard Communication standard to align the standard with the Globally Harmonized System for Classification and Labelling of Chemicals (GHS). Under the GHS revisions, as with the current standard, particle size alone does not serve as a basis for classifying a chemical as hazardous. However, where a chemical has been classified as hazardous, the standard requires the manufacturer or importer to include relevant information regarding hazards and protective measures on the safety data sheet.

We appreciate your concerns regarding nanotechnology, and we always look forward to working with stakeholders to protect workers. Thank you for your continued support of worker safety and health.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Michaels', written in a cursive style.

David Michaels, PhD, MPH



United States Department of Agriculture

Office of the Secretary  
Washington, D.C. 20250

MAR 12 2012

The Honorable Mark Miller  
Special Committee on Nanotechnology  
Wisconsin Joint Legislative Council  
One East Main Street, Suite 401  
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Madison, Wisconsin 53701-2536

Dear Senator Miller:

Thank you for your letter of February 2, 2012, cosigned by Senator Sheila Harsdorf, regarding the Federal programs related to nanotechnology. I apologize for the delay in this response.

It is my goal to lead the Department of Agriculture's (USDA) efforts in addressing the critical challenges of a safe and secure food supply, improved nutrition for lifelong health, mitigation and adaptation to climate change impacts on agricultural production, national energy needs, and the sustainable use of our natural resources. Advanced science and technology is an important and integral part of these efforts. Nanoscale science, engineering, and technology have been generating remarkable scientific and technological advances spanning from the evolutionary to the revolutionary. These advances enable a broad spectrum of beneficial applications that bear significant impact on society and industrial sectors, including agriculture, food, forestry, and the environment.

USDA agencies, including the National Institute of Food and Agriculture, the Forest Service, and the Agricultural Research Service, have been active participants of the National Nanotechnology Initiative (NNI), working in concerted efforts with the National Science and Technology Council under the Office of Science and Technology Policy and with other agencies on the common vision and goals of the NNI. Examples of innovative research and development for nanotechnology-enabled solutions for agriculture and food systems include improvement of the nutritional quality of foods; early detection and effective intervention technologies for food safety and biosecurity; novel uses and high-value-added products of nano-biomaterials of agricultural and forestry origins for food and non-food applications; nanoscale-based sensing mechanisms and devices for reliable and rapid detection of diseases and monitoring of physiological biomarkers for optimal agricultural production; precision agriculture technologies to efficiently manage applications of agricultural chemicals and water resources; water quality improvements; discovery and characterization of nanoscale phenomena and processes important to agricultural production species; and more. In addition, our nanotechnology programs also contribute to better understanding of relevant environmental, health, and safety issues of


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engineered nanoparticles and nanomaterials for responsible development of nanotechnology applications to food, agricultural production, and the environment.

I thank you for your suggestions and recommendations to the Federal Nanotechnology Programs regarding nanotechnology research priorities, regulations, worker safety, and international cooperation. I agree that your suggested activities are consistent with the NNI 2011 Environment, Health, and Safety Research Strategy (<http://nano.gov/node/681>). The NNI and the Nanotechnology Environment and Health Implications working group have been actively leading and coordinating with the agencies to address the activities in your recommendations.

Again, thank you for your letter and for your interest in USDA nanotechnology programs. A similar letter is being sent to Senator Harsdorf.

Sincerely,



Thomas J. Vilsack  
Secretary